

CHAPTER 1- INSPECTION AND RESPONSIBILITIES

Introduction

This Manual is a guide and should not take the place of the Standard Specifications, The Plans, AASHTO Specifications, ASTM Specifications, The Manual of Instructions, Materials Manual Part 8, Covering Utah Industries.

The purpose of this manual is to give the inspector a general guideline for Roadside Development Inspection.

The inspector represents the Utah Department of Transportation and must make a detailed inspection of the work as it is being performed to ensure quality work for the public money being spent.

General Inspection

Qualifications All Inspectors Should Have:

1. Dependability (attentive to job)
2. Conscientiousness (see that the state gets what is paid for)
3. Ability to communicate verbally and in writing with supervisor as well as the contractor
4. Knowledge of Safety Regulations
5. Good documentation skills (accurate, neat and timely with documentation)
6. Knowledge of Standard Specifications
7. Knowledge of Special Provisions of particular jobs
8. Ability to read and understand plans
9. Ability to generate and understand random numbers
10. Ability to read and understand survey stakes
11. Knowledge of the order of authority (chain of command)

Preparation For Inspection:

1. The Inspector, and Level IV Inspector and Resident Engineer must review the plans when they are first received. Contract pay items should be checked against the plan quantities for accuracy.
2. Engineer, assigns one or more inspection functions to inspectors, office and lab technicians as the work progresses.
3. Inspector reviews assigned functions and then reviews the contract plans, specifications, and special provisions, noting all provisions applicable to the assigned responsibilities.
4. Inspector reviews UDOT Minimum Sampling and Testing requirements, noting requirements for sampling, testing, and certificates of compliance for assigned responsibilities.
5. Inspector reviews sampling and testing requirements with Lab personal. A determination is made of how and when sampling and testing are to be done, who is to do them, and how to report the results.
6. Inspector reviews field staking of assigned items and discusses any questions that may arise with the Field Engineer, or Resident Engineer.
7. Inspector reviews documentation requirements and note keeping system for assigned items with Level IV Inspector, Field Office Technician, or Engineer.
8. Inspector reviews safety requirements for the assigned work, reviews MUTCD, and any other safety manuals that may be pertinent and discusses any anticipated problems with the Level IV Inspector or Engineer.
9. Inspector discusses the work with any sub ordinaries he is assigned to supervise, outlining, in detail, their responsibilities, methods, and procedures to be followed, documentation requirements, safety practices, equipment responsibilities, etc.
10. Inspector discusses the work with the contractor's supervisor in charge of doing the work he is assigned to inspect:
 - a. To learn of contractors planned methods, procedures, equipment, and men to be used.

- b. To get contractors proposed time schedule.
- c. To inform the contractor of any, of the following that may apply:
 - (1) Signing necessary before work starts.
 - (2) Safety requirements including flagging, advance warning devices, or pilot car operation.
 - (3) Traffic Control Requirements and Maintenance of traffic. (MOT).
 - (4) Certificates of Compliance needed before materials are incorporated into the work.
 - (5) Construction staking and stationing practice.
 - (6) Sampling and testing procedures and requirements.
 - (7) Method of measurements and method and time of payment for contract bid items.
 - (8) Any method or procedures proposed by the contractor that appear to be contrary to contract plans, specifications, or special provisions.
 - (9) Environmental protection requirements.
 - (10) Review CSS commitments (context sensitive solutions)
 - (11) Review Partnering concepts.
 - (12) To discuss any special problems that may have been identified during any of the above preparations.
 - (13) The Inspector discusses any questions or problems that may have been identified during their preparation with the Resident Engineer. These must be resolved so that inspection activities can be carried on with a clear understanding of what is to be done, how it is to be done, when it is to be done, and who is to do it.
 - (14) Obtain the proper field notes, diary, and equipment required for the assigned inspection functions.

Duties of Inspector - 00727

Inspectors employed by the Department are authorized to inspect all work and materials furnished. Such inspection will extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The inspector is not authorized to alter or waive the provisions of the contract. The inspector is not being authorized to issue instructions contrary to the plans and specifications, or to act as foreman for the contractor.

Level IV Inspector

The Resident Engineer may authorize the Level IV inspector to:

1. Supervise all inspections, for the project assigned.
2. Inspect all different phases of the work.
3. Check to determine if proper test procedures are being followed.
4. Check test work sheets and reports.

The Level IV inspector will report all deviations from specification requirements immediately to the Resident Engineer, and verbally notifies the contractor's superintendent or foreman of deviations. Evaluates the extent of deviation from specification requirements to ascertain if work can be accepted as meeting substantial compliance by corrective action or if materials or other substandard work must be placed.

Project Inspector

1. The Project Inspector is responsible to the Resident Engineer, and coordinates activities with the Level IV Inspector or Field Engineer.
2. Insure proper inspections over the construction phase assigned.
3. Checks to see that all material certifications, certificates of compliance and tests results are on file as required.
4. Assures that all required testing and sampling is done in accordance with applicable standards.
5. Maintains inspection file
6. Keeps project documentation and diary current.

Lab Technician - Materials Manual Part 8 -1014

1. Assures that all persons responsible for sampling of materials and performing and reporting on tests are qualified through WAQTC or TTQP Program.
2. Performs all project lab work in the manner prescribed by specifications.
3. Provides test results for project use
4. Coordinates with the Inspector or Resident Engineer to provide test results to the contractor.
5. Keeps current on specifications and special provisions.
6. Review of specifications, should be done before the project begins.
7. Maintains communication with Resident Engineer or Field Engineer.
8. Makes immediate notification to the Project Inspector and Resident Engineer of any noncompliance problems.
9. Uses judgment, but never waives a specification.

Field Notes

7. Use a black ballpoint pen. Avoid crowding. Keep books as clean as possible. Errors made should be corrected with a line drawn through the error and initialed. (No erasures allowed.)
8. Use standard symbols and abbreviations to keep notes compact.
9. Set pages in books ahead, so that data can be clearly indicated. Do not make statements that are capable of being understood in more than one way. Write down descriptions and make sketches for clarity. Be consistent in the way that data is recorded. (Write information so that if someone else picks up the books, they can clearly understand all data).
10. Show all pertinent measurements and observations. Incomplete and unclear notes result in lost time and additional costs in trying to decipher them. Erroneous data results in errors, general distrust of the party's work, and inability to defend the work to others. Accuracy in measurements and calculations of contract quantities, and with records that are neat, consistent, complete, and sufficiently

detailed are of prime importance. Records must be readily understandable by others who are unfamiliar with the contract work but are obliged to use or check these records.

11. UDOT's Central Laboratory will accept the Manufacturer's Certificate of Compliance and the test report for material requiring pretesting will accompany those items to the project site where they will be inspected for final acceptance.
12. UDOT Minimum Sampling and Testing Requirements must be thoroughly understood. It is the Project inspector's and Level IV Materials responsibility to make sure the minimum testing requirements have been met, for the project records. And any additional tests that may be required for the project control.
13. When test results do not meet the requirements of the specifications, corrective measures must be taken. Additional tests must be made after such correction. The project records shall contain the results of the original test, together with the supplemental tests. Adequate explanation must be provided to indicate the corrective measures taken.
14. **The inspector must not in any case act as a foreman for the contractor.** It is the inspector's duty to ensure all of the materials and finished work conform to the specification requirements and document these findings.
15. It is necessary for the inspector to become familiar with the markings on the field control stakes. Any error discovered will be brought to the attention of the Contractor, and Resident Engineer, Field Engineer or Level IV Inspector. Corrections should be made as soon as possible
16. Record all inspections in a daily diary. Fill out completely including: date, weather conditions, and signed by the inspector.

Field Book

17. All inspections should be recorded in a field book, Include date, Quantity placed and signed by the inspector.

18. The inspector must document work on the project as it is being completed. Records must show what work listing the item and quantity of work done is performing. All pay items that are worked on or completed.

Electronic Field Book (Ipaq's)

Download contract pay items and stationing information from the Project Accounting System and Estimate System to a hand held device at **PDBS Pocket PC Field book Download Center:**

<http://www.udot.utah.gov/index.php/m=c/tid=448>

VII. References

The following is a list of printed materials available to the inspector that may be helpful for more details when questions arise.

1. State of Utah Standard Specifications
2. Special Provisions, supplementing the Standard Specifications, and published with the plans for each particular project.
3. Manual of Uniform Traffic Control Devices (MUTCD)
4. Construction Manual of Instruction

<p align="center">Duties of Inspector</p>
--

SPEC	INSPECTION LEVEL	INSPECTION OBJECTIVE	INSPECTOR ACTIVITY
00727 – 1.12	Important	The inspector represents the Utah Department of Transportation and must make a detailed inspection of the work as it is being performed to ensure quality work for the public money being spent.	<p>Department Inspectors are authorized to inspect all work and materials furnished.</p> <p>Inspection may extend to the preparation, fabrication, or manufacture of the materials to be used.</p> <p>Do not alter or waive the contract provisions, issue instructions contrary to the Contract, or act as foreman for the Contractor</p> <p>Reject work or materials until any issue in question can be referred to and decided by the Engineer.</p>

CHPATER ONE – Check List

Confirming	Attributes
YES () NO () N/A ()	Reviewed assigned functions and then reviewed the contract plans, specifications, and special provisions, noting all provisions applicable to the assigned responsibilities.
YES () NO () N/A ()	Reviewed UDOT Minimum Sampling and Testing requirements, noting requirements for sampling, testing, and certificates of compliance for assigned responsibilities.
YES () NO () N/A ()	Reviewed sampling and testing requirements with Lab personal. A determination is made of how and when sampling and testing are to be done, who is to do them, and how to report the results.
YES () NO () N/A ()	Reviewed field staking of assigned items and discusses any questions that may arise with the Field Engineer, or Resident Engineer.
YES () NO () N/A ()	Reviewed documentation requirements and note keeping system for assigned items with Level IV Inspector, Field Office Technician, or Engineer.
YES () NO () N/A ()	Inspector reviews safety requirements for the assigned work, reviews MUTCD, and any other safety manuals that may be pertinent and discusses any anticipated problems with the Level IV Inspector or Engineer.

NOTES:

[illegible]

NOTES:

This image shows a blank sheet of white paper with horizontal ruling lines. There are 18 lines in total, evenly spaced from top to bottom. Each line begins with a small, dark gray arrowhead pointing to the right. The lines extend across the entire width of the page.